

AMENDMENTS TO THE CLAIMS:

Please amend the claims as follows:

1. (Previously presented) A method of producing a plurality of semiconductor elements by individually dividing said semiconductor elements formed on a substrate, said method comprising:

removing semiconductor layers on parting lines so that (i) only an electrode-forming layer on a side near said substrate remains or (ii) no semiconductor layers remains on said parting lines;

forming a protective film so that said semiconductor layers are covered with said protective film and said protective film can be removed by an after-process;

scanning said substrate with a laser beam along said parting lines to form separation grooves in a front surface of said substrate; and

removing said protective film and unnecessary products produced by said laser beam scanning,

wherein said separation grooves formed along said parting lines by said laser beam scanning are used for dividing said substrate into individual semiconductor elements.

2. (Previously presented) A method of producing a plurality of semiconductor elements according to claim 1, wherein the semiconductor layer removal is carried out in an electrode-forming etching process for exposing an electrode-forming portion of an electrode-forming layer on a side near said substrate by etching.

3. (Previously presented) A method of producing a plurality of semiconductor elements according to claim 1, wherein in the semiconductor layer removal, electrode-forming layer side part of said substrate on said parting lines is also removed by dicing.

4. (Previously presented) A method of producing a plurality of semiconductor elements according to claim 1, wherein rear grooves corresponding to said separation grooves are formed in a rear surface of said substrate after the protective film and unnecessary product removal.

5. (Previously presented) A method of producing a plurality of semiconductor elements according to claim 1, wherein a rear surface of said substrate is polished to reduce the thickness of said substrate after the protective film and unnecessary product removal so that said substrate can be divided into individual semiconductor elements by use of only said separation grooves formed in said front surface of said substrate.

6. (Previously presented) A method of producing a plurality of semiconductor elements according to claim 1, wherein a rear surface of said substrate is polished to reduce the thickness of said substrate after the protective film and unnecessary product removal and rear grooves corresponding to said parting lines are then formed in a rear surface of said substrate.

7. (Currently amended) A method of producing a plurality of semiconductor elements by individually dividing semiconductor elements formed on a substrate, said method comprising:

performing a polishing or blasting process ~~with respect to~~ on separation grooves after forming said separation grooves by laser beam irradiation.

8. (Original) A method of producing a plurality of semiconductor elements according to claim 7, wherein:

said separation grooves are formed in a rear surface of said substrate opposite to a front surface of said substrate on which semiconductor layers and electrodes are formed; and said polishing or blasting process is applied to said rear surface.

9. (Original) A method of producing a plurality of semiconductor elements according to claim 7, wherein:

when said blasting process is used, particles used in said blasting process are selected so that a medium value of diameters of said particles is equal to about a half width of each separation groove.

10. (Previously presented) A method of producing a plurality of semiconductor elements according to claim 7, wherein said substrate comprises a sapphire substrate.

11. (Previously presented) A method of producing a plurality of semiconductor elements according to claim 7, wherein:

when said blasting process is used, particles used in said blasting process comprise mainly at least one of alumina and silicon carbide.

12. (Previously presented) A method of producing a plurality of semiconductor elements by individually dividing said semiconductor elements formed on a substrate, said method comprising:

removing semiconductor layers on parting lines so that (i) only an electrode-forming layer on a side near to said substrate remains on said parting lines or (ii) there is no semiconductor layer on said parting lines; and

scanning said substrate along said parting lines with a laser beam to thereby form broken line-shaped or dot line-shaped separation grooves,

wherein said broken line-shaped or dot line-shaped separation grooves formed by laser beam scanning along the parting lines are used so that said substrate is divided into individual semiconductor elements.

13. (Previously presented) A method of producing a plurality of semiconductor elements according to claim 12, wherein the semiconductor layer removal is carried out by an electrode-forming etching process for exposing an electrode-forming portion of said electrode-forming layer by etching.

14. (Previously presented) A method of producing a plurality of semiconductor elements according to claim 12, wherein in the semiconductor layer removal, a part of the element-forming surface of said substrate on said parting lines is also removed by dicing.

15. (Previously presented) A method of producing a plurality of semiconductor elements according to claim 12, further comprising:

forming a protective film so that layers formed on a front surface side of said substrate are covered with said protective film before the laser beam scanning and said protective film can be removed by an after-process; and

removing said protective film and unnecessary products produced due to laser beam scanning after the laser beam scanning.

16. (Original) A method of producing a plurality of semiconductor elements according to claim 12, wherein before said separation grooves are used for dividing said substrate into elements, rear grooves corresponding to said parting lines are formed in a rear surface of said substrate.

17. (Original) A method of producing a plurality of semiconductor elements according to claim 12, wherein before said separation grooves are used for dividing said substrate into elements, a rear surface of said substrate is polished to reduce a thickness of said substrate so that said substrate can be divided into individual semiconductor elements only by said separation grooves formed in the front surface of said substrate.

18. (Original) A method of producing a plurality of semiconductor elements according to claim 12, wherein before said separation grooves are used for dividing said substrate into elements, a rear surface of said substrate is polished to reduce a thickness of

said substrate and then rear grooves corresponding to said parting lines are formed in the rear surface of said substrate.

19. (Previously presented) A method of producing a plurality of semiconductor elements by extracting said plurality of light-emitting elements from a semiconductor wafer formed by lamination of a plurality of nitride compound semiconductor layers on a crystal growth substrate, said method comprising:

applying a laser beam on a metal layer formed on said semiconductor wafer and serving as a negative electrode of each of said semiconductor elements to thereby form continuous line-shaped, dot line-shaped, broken line-shaped or cross-shaped separation grooves for separating said semiconductor wafer into said plurality of semiconductor elements.

20. (Previously presented) A method of producing a plurality of semiconductor elements according to claim 19, wherein:

said method further comprises laminating said metal layer on an approximately entire outer circumference of each of said semiconductor elements before division so that said metal layer is circled over said approximately entire outer circumference of each of said semiconductor elements; and

in said laser beam applying, said separation grooves are formed so that each of said separation grooves is circled over said approximately entire outer circumference of each of said semiconductor elements.

21. (Previously presented) A method of producing a plurality of semiconductor elements according to claim 19, further comprising:

forming a protection film for covering a front surface of said semiconductor wafer before said laser beam applying; and
removing said protective film after said laser beam applying.

22. (Previously presented) A method of producing a plurality of semiconductor elements according to claim 19, further comprising polishing a rear surface of said crystal growth substrate to make said crystal growth substrate thin.

23. (Previously presented) A method of producing a plurality of semiconductor elements according to claim 19, further comprising forming parting lines in said crystal growth substrate from the rear surface of said crystal growth substrate so that said parting lines face said separation grooves respectively.

24. (Original) A semiconductor element extracted from a semiconductor wafer formed by lamination of a plurality of nitride compound semiconductor layers on a crystal growth substrate, wherein said semiconductor element is produced by a production method defined in claim 19.

25. (Previously presented) A semiconductor element according to claim 24, wherein:
said semiconductor element comprises a wire-bonding type semiconductor element;
and

said semiconductor element includes an outer circumferential negative electrode having an enclosure shape for enclosing a light-emitting portion at least partially from the outside.

26. (Previously presented) A semiconductor element according to claim 24, wherein:
said semiconductor element comprises a flip chip type semiconductor element provided with a translucent substrate; and

said semiconductor element includes an outer circumferential negative electrode having an enclosure shape for enclosing a light-emitting portion at least partially from the outside.

27. (Previously presented) A semiconductor element according to claim 25, wherein said outer circumferential negative electrode is formed to have a height at least equal to a height of a light-emitting layer on a side of at least one side wall of said light-emitting layer.

28. (Original) A semiconductor element according to claim 27, wherein at least one part of said outer circumferential negative electrode is formed on said side wall through an electrically insulating film.

29. (Previously presented) A semiconductor element according to claim 26, wherein said outer circumferential negative electrode is formed on said side wall through an electrically insulating film.

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10

Docket No. T36-156800M/RS (NGB.256)

30. (New) The method of claim 7, wherein said polishing or blasting process is applied to a surface on which said separation grooves are formed.